## Version with Markings to Show Changes Made

(AMENDED) A method of determining a mutagen comprising:
contacting a test compound with a host cell comprising a DNA sequence encoding a
fluorescent protein operably linked to a mutagen sensitive gene[;], the host cell being in
logarithmic or stationary growth phase;

monitoring a host cell preparation for the fluorescent protein; and determining a mutagen when an amount of the fluorescent protein meets or exceeds a predetermined threshold value, wherein determining further comprises statistically analyzing a difference in the location of a data distribution, a difference in a shape of a data distribution, or a combination thereof.